

In re Patent Application of:

AMMAR

Serial No. **09/863,052**

Filing Date: **May 22, 2001**

REMARKS

Claims 1-2 and 4-22 remain in this application. Claim 3 has been cancelled. Claims 1, 4, 5, 12 and 16 have been amended.

Applicant thanks the Examiner for the detailed study of the application and the prior art.

Applicant notes the indication of allowable subject matter for claims 5 and 16. Applicant has reviewed the prior art and agrees with the Examiner as to patentability for subject matter directed to the memory that includes stored values of preset MMIC characteristics at various stages in a radio frequency circuit. Nowhere does the prior art of record either singularly or in combination with each other disclose a controller operative with a microwave monolithic integrated circuit (MMIC) and having at least one amplifier and a controller that includes a memory with stored values of preset MMIC characteristics at various stages in a radio frequency circuit, such that the controller can tune the at least one amplifier to an optimum operating condition based on the stored values.

These stored values of preset MMIC characteristics at various stages in the radio frequency circuit could include the optimum drain current and an expected amplifier output as preferred examples. Thus, independent claim 1 has been amended to stress the stored values of preset MMIC

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characteristics at various stages in a radio frequency circuit in order to place the case in condition for allowance. Claim 5 has been amended to maintain that the stored values could be the current and expected amplifier output, as an example.

Winslow may disclose some form of a transceiver and a controller operatively connected to a MMIC for sensing amplifier operating conditions and tuning (i.e., adjusting) to an operating condition. Winslow has no memory to store any type of stored values. The Examiner uses U.S. Patent No. 5,551,067 to Hulkko et al. (hereinafter "Hulkko") to teach that a power amplifier has a memory and stored values of operating conditions. The amplifier is tuned based on stored values. Thus, according to the Examiner, it would be obvious to modify the circuit of Winslow by Hulkko to adjust a transmitting signal according to its preset value to transmit a signal at a desired power.

Applicant notes that Hulkko is directed to an RF booster controlled with an external control circuit, for example, a hand portable radio telephone, which provides the booster with control signals AGC1, BENA1, BENA2, and MBUS. The MBUS control signal is a multiple-use bus control signal and the BENA signals are time-critical control signals from the radio telephone to the RF booster. The signals are synchronized according to a time diagram, with the starting and ending point of the frame to be transmitted in the radio

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telephone. The AGC1 is an automatic gain control signal. The entire system is used with a time division multiple access or global system mobile cellular or other radio telephone system.

Although Hulkko may disclose some use of memory to store calibration data to control the voltage through the transmitter power control circuit, it nowhere suggests that the controller could include a memory having stored values of preset MMIC characteristics at various stages in a radio frequency circuit. Hulkko is primarily directed to controlling the one transmitter power control circuit.

As to the cited U.S. Patent No. 6,351,189 to Hirvilampi, Applicant notes that it is directed to auto-biasing an amplifier using a feedback loop that adjusts a bias condition to a state between transmission periods. A feedback circuit 314 monitors the drain current to a transistor Q41 and drives the DC voltage to the gated transistor. An integrator 324 causes the voltage stored by a voltage hold element, i.e., capacitor C42. A voltage signal is conveyed to an amplifier A43 by C42 to increase, causing the bias of the gate of the transistor Q41 to increase. A desired amplifier bias voltage to the gated transistor Q41 is stored in C42 and applied to the gate of the transistor Q41. It is clear that Hirvilampi is a simple circuit formed as a capacitor C42 in Figure 4. Only a small charge is held in this capacitor corresponding to the desired amplifier bias voltage and stored in the

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capacitor. Nowhere does Hirvilampi disclose a controller having any memory with stored values of preset MMIC characteristics at various stages in the radio frequency circuit.

Applicant contends that the present case is in condition for allowance and respectfully requests that the Examiner issue a Notice of Allowance and Issue Fee Due.

If the Examiner has any questions or suggestions for placing this case in condition for allowance, the undersigned attorney would appreciate a telephone call.

Respectfully submitted,



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